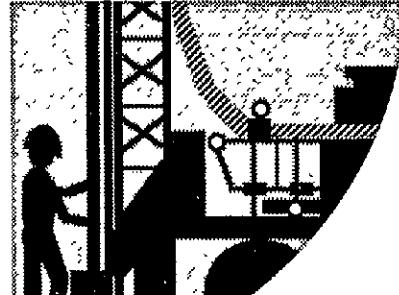
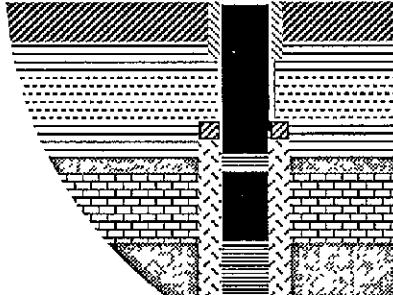
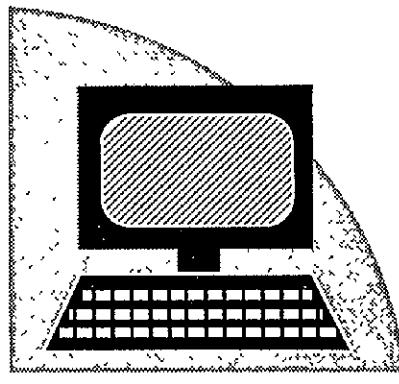
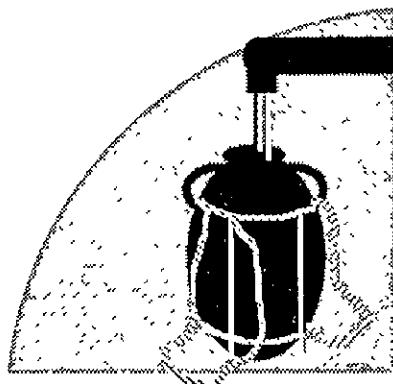




SOMALI DEMOCRATIC REPUBLIC
MINISTRY OF MINERALS AND WATER RESOURCES
WATER DEVELOPMENT AGENCY



Comprehensive Groundwater Development Project



Maps

End of Project Report

LOUIS BERGER INTERNATIONAL, Inc.

ROSCOE MOSS Co.

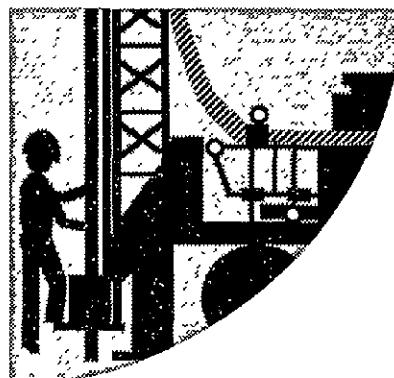
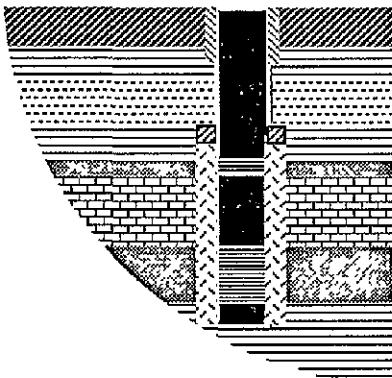
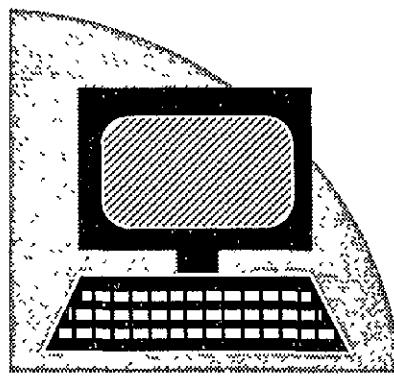
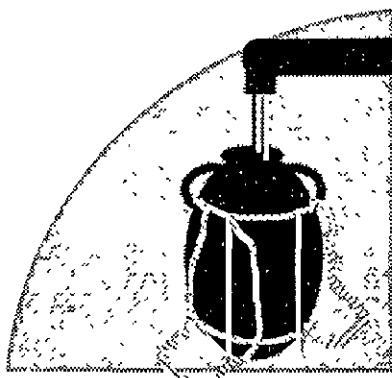




SOMALI DEMOCRATIC REPUBLIC
MINISTRY OF MINERALS AND WATER RESOURCES
WATER DEVELOPMENT AGENCY



Comprehensive Groundwater Development Project



Volume III

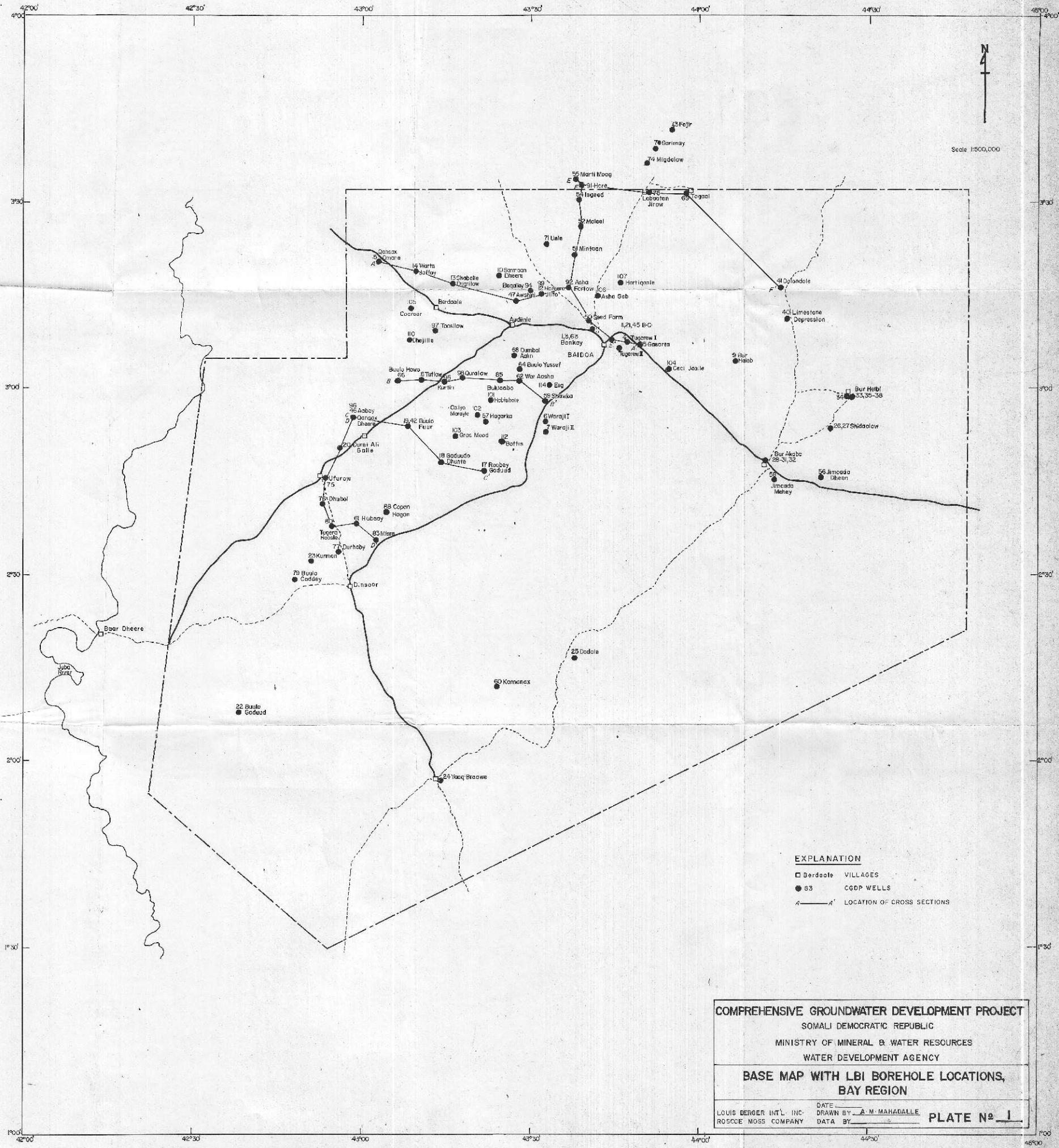
Maps

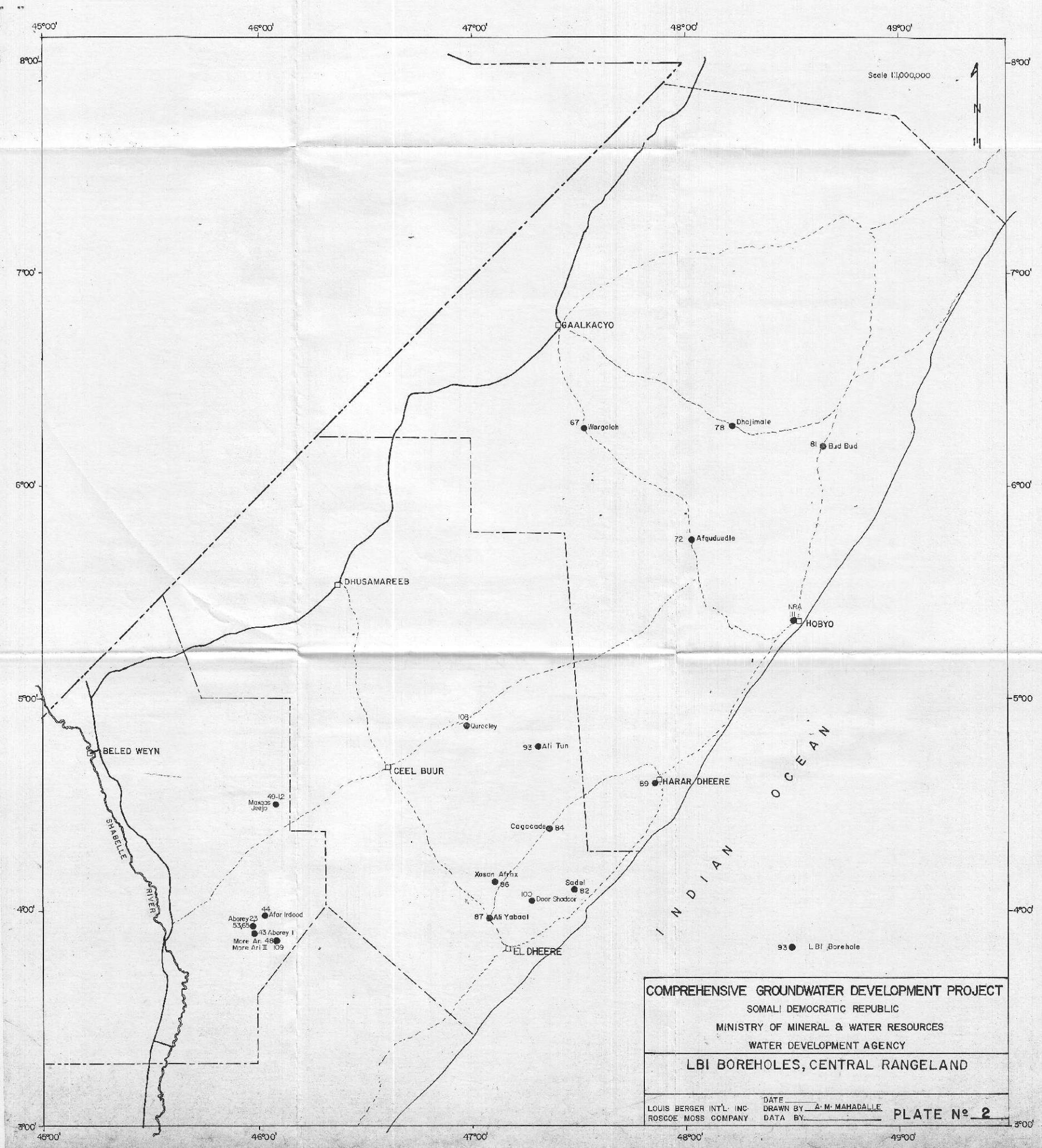
End of Project Report

LOUIS BERGER INTERNATIONAL, Inc.

ROSCOE MOSS Co.





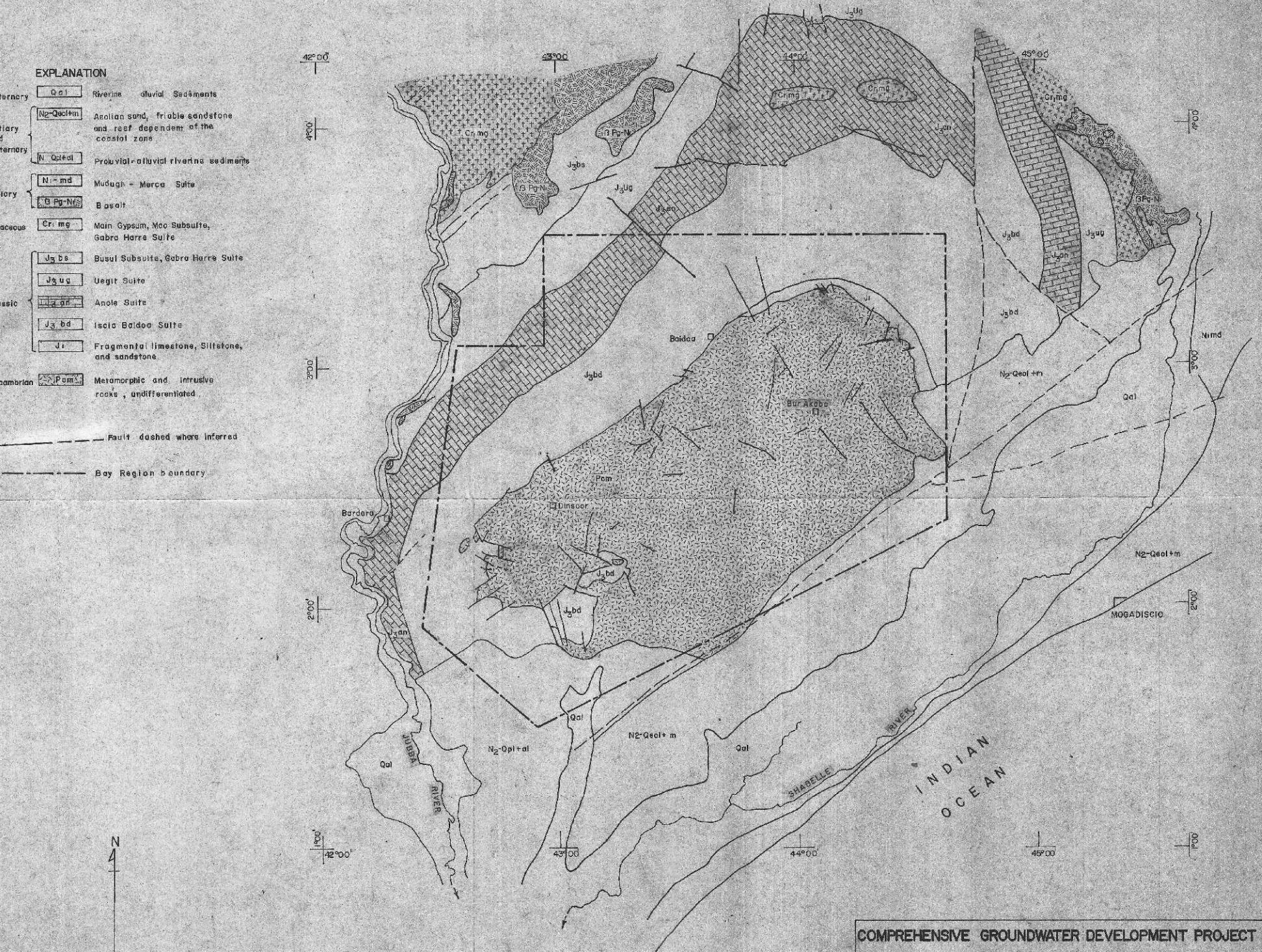


EXPLANATION

Quaternary	Q1	Riverine fluvial Sediments
Tertiary and Quaternary	N2-Quaternary	Aeolian sand, friable sandstone and reef dependent of the coastal zones
Tertiary	N1-Qat.	Proluvial-alluvial riverine sediments
Tertiary	N1-md	Mudug - Merca Suite
Cretaceous	CB Pg-N1c	Basalt
Cretaceous	Cri mg	Main Gypsum, Moa Subsuite, Gabra Harre Suite
Jurassic	J3 bs	Busul Subsuite, Gabra Harre Suite
Jurassic	J4 ug	Uegit Suite
Jurassic	J5 ab	Anole Suite
Jurassic	J3 bd	Iscio Baldoa Suite
Precambrian	J1	Fragmental limestone, Siltstone, and sandstone.
Precambrian	N1-Pem's	Metamorphic and Intrusive rocks , undifferentiated

— Fault dashed where inferred

— — — — Bay Region boundary



COMPREHENSIVE GROUNDWATER DEVELOPMENT PROJECT

SOMALI DEMOCRATIC REPUBLIC

MINISTRY OF MINERAL & WATER RESOURCES

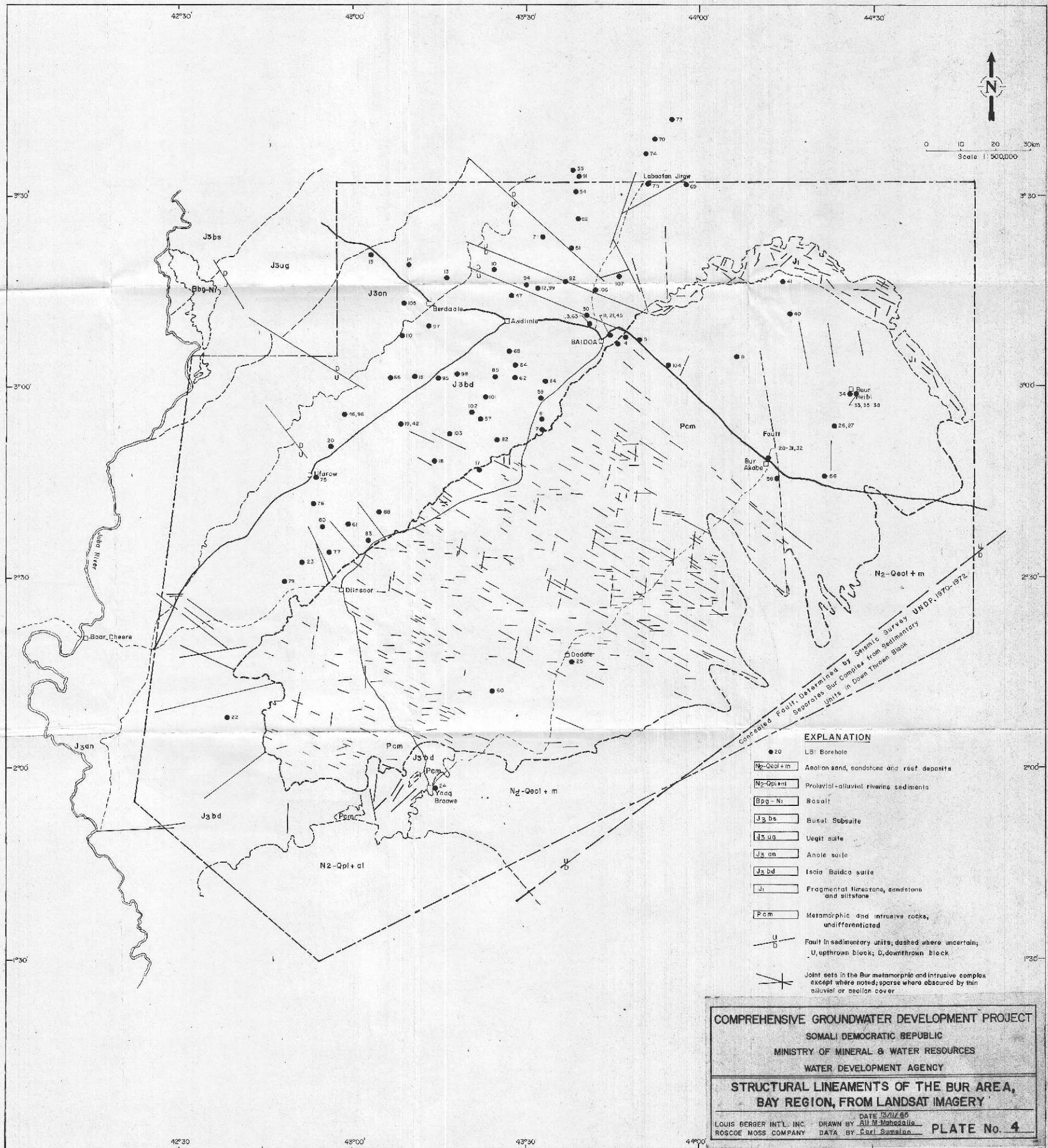
WATER DEVELOPMENT AGENCY

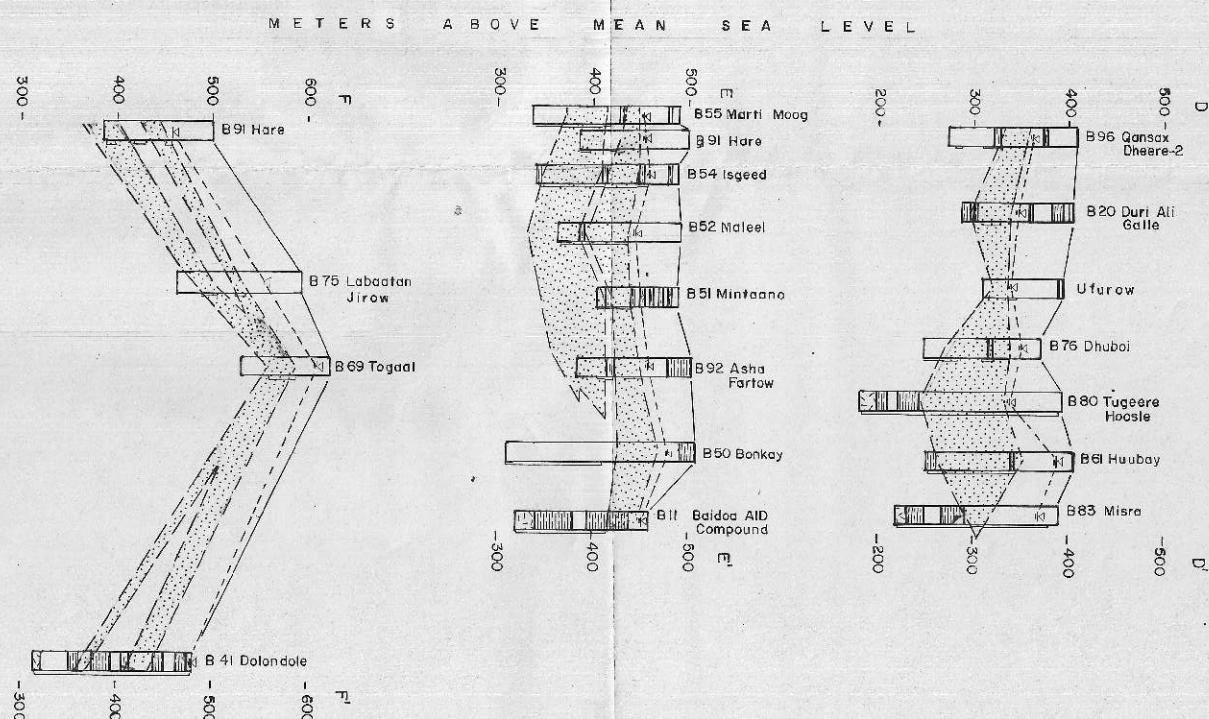
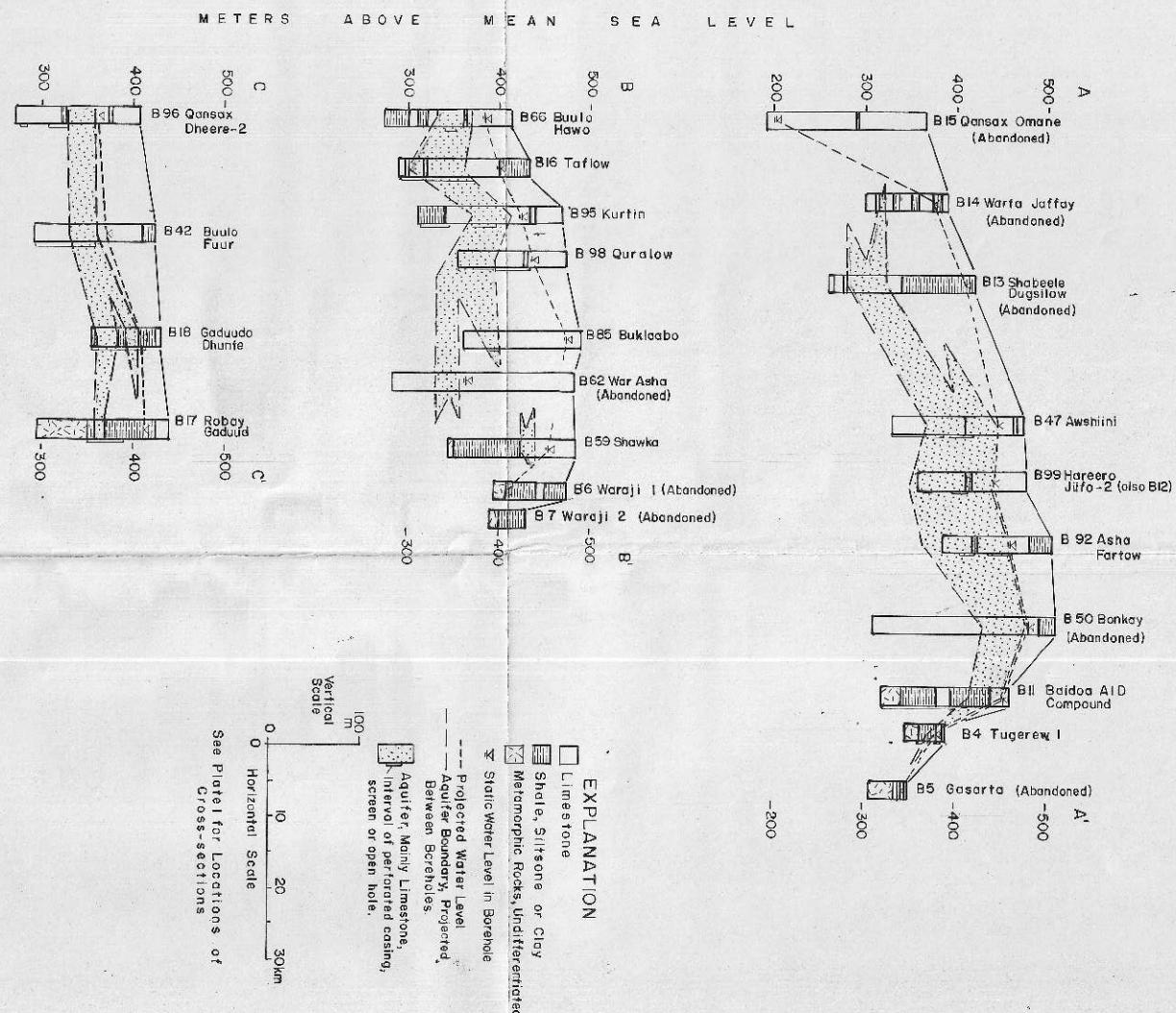
GEOLOGIC MAP OF BAY REGION
ADAPTED FROM UNDP MINERALS GROUNDWATER SURVEY PROJECT MAPS
(MAPS DATED 1975)

LOUIS BERGER INTL. INC.
ROSCOE MOSS COMPANY

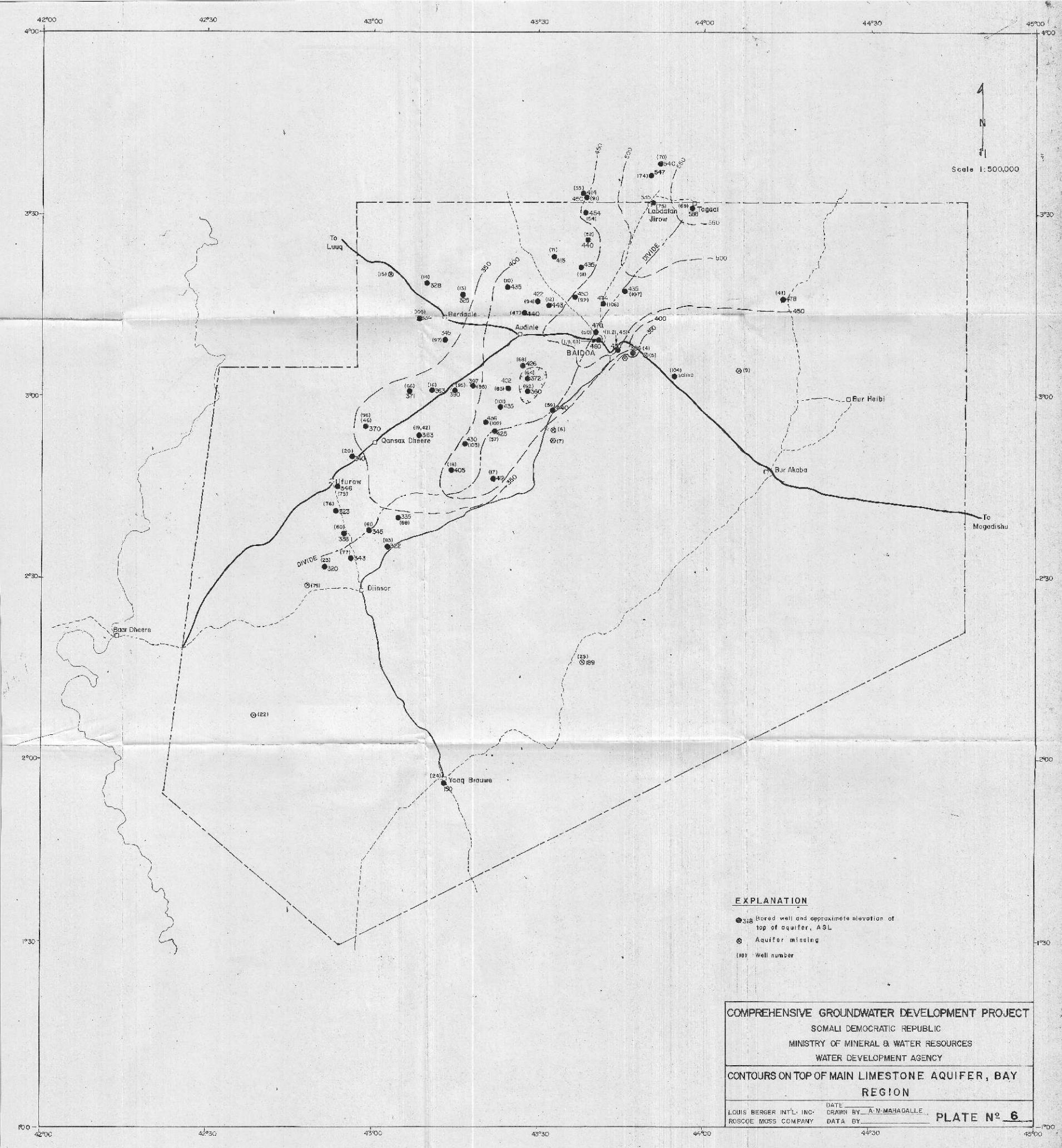
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DRAWN BY A. M. MAHADALLE
DATA BY _____

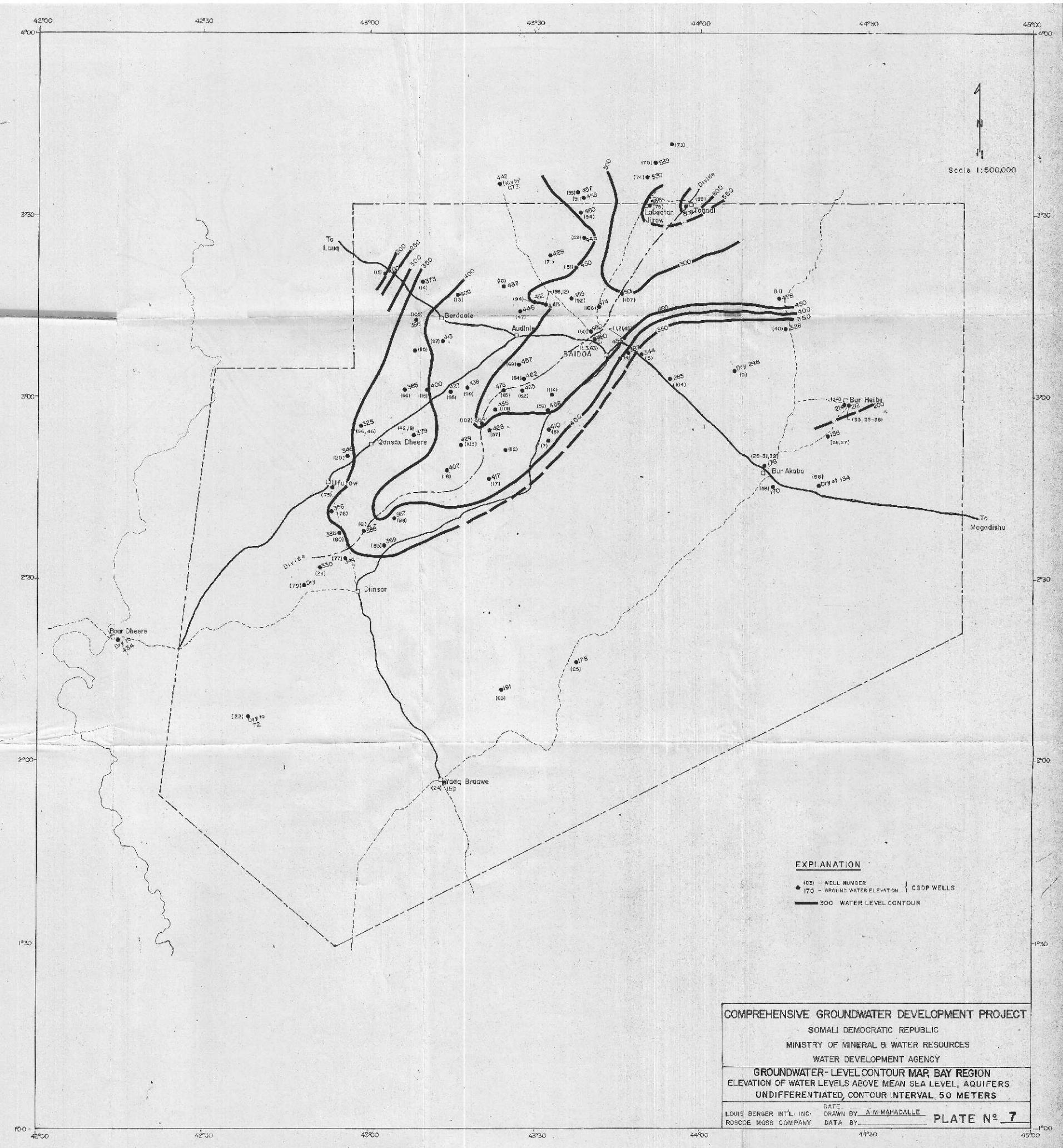
PLATE № 3

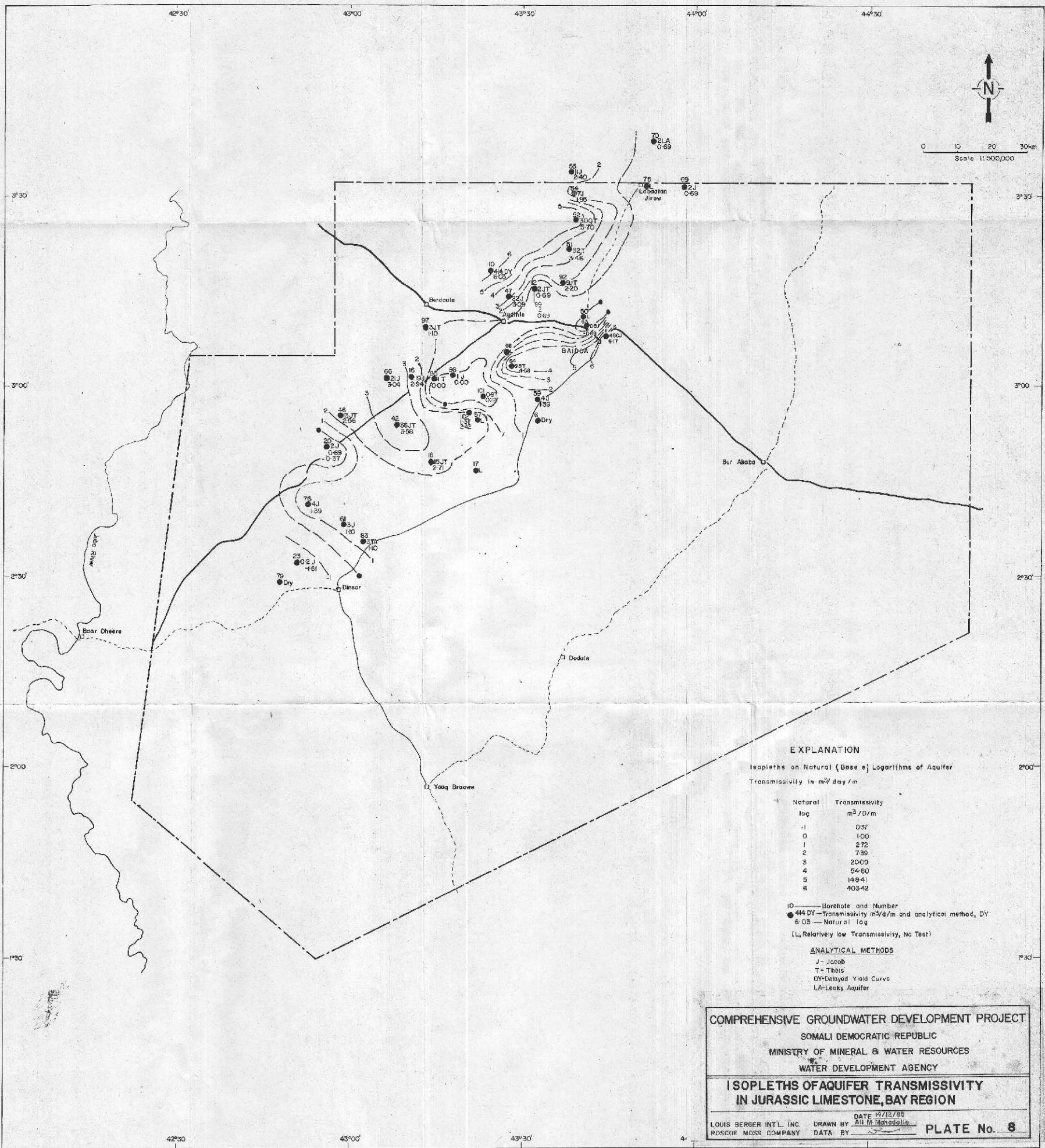


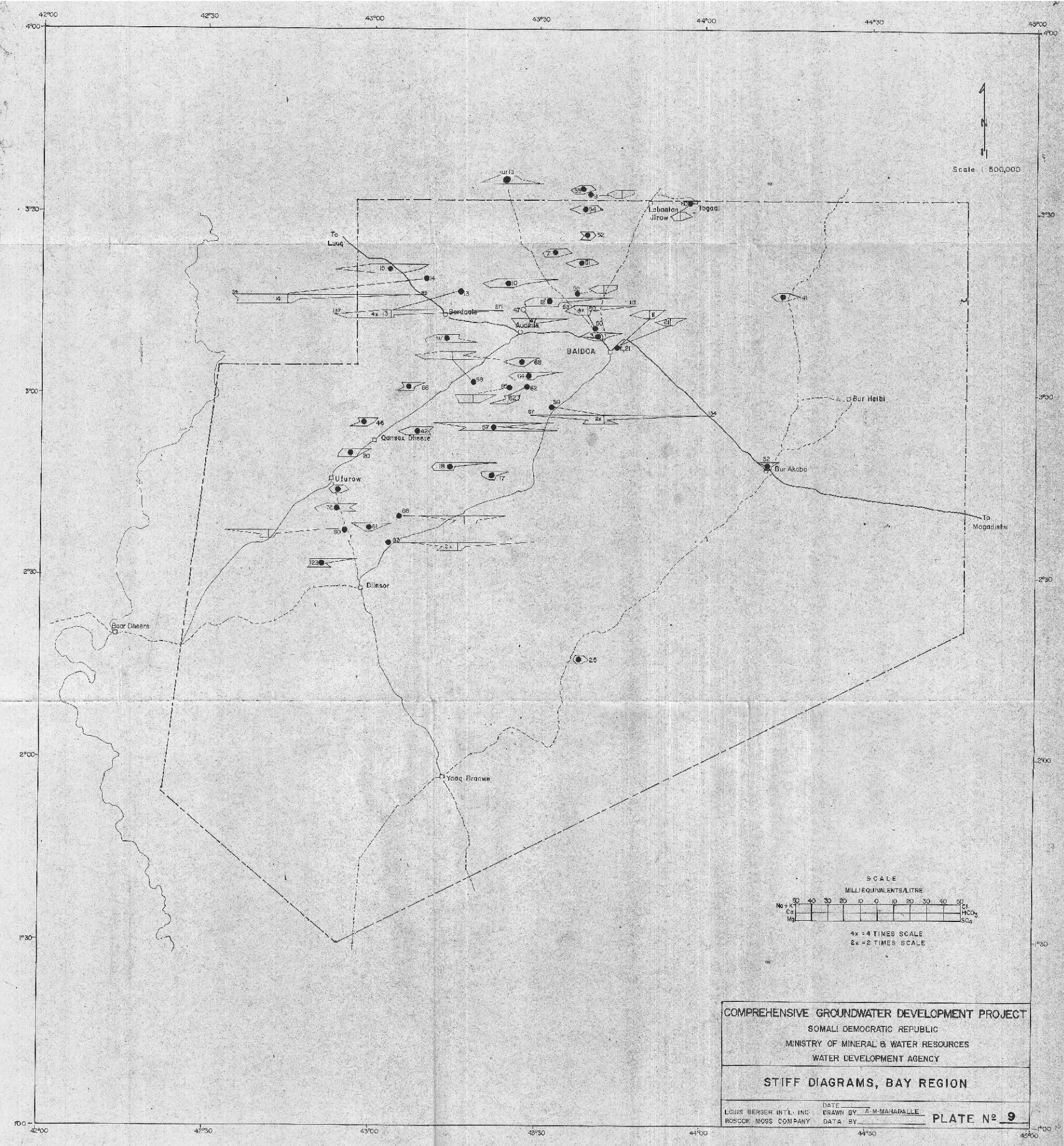


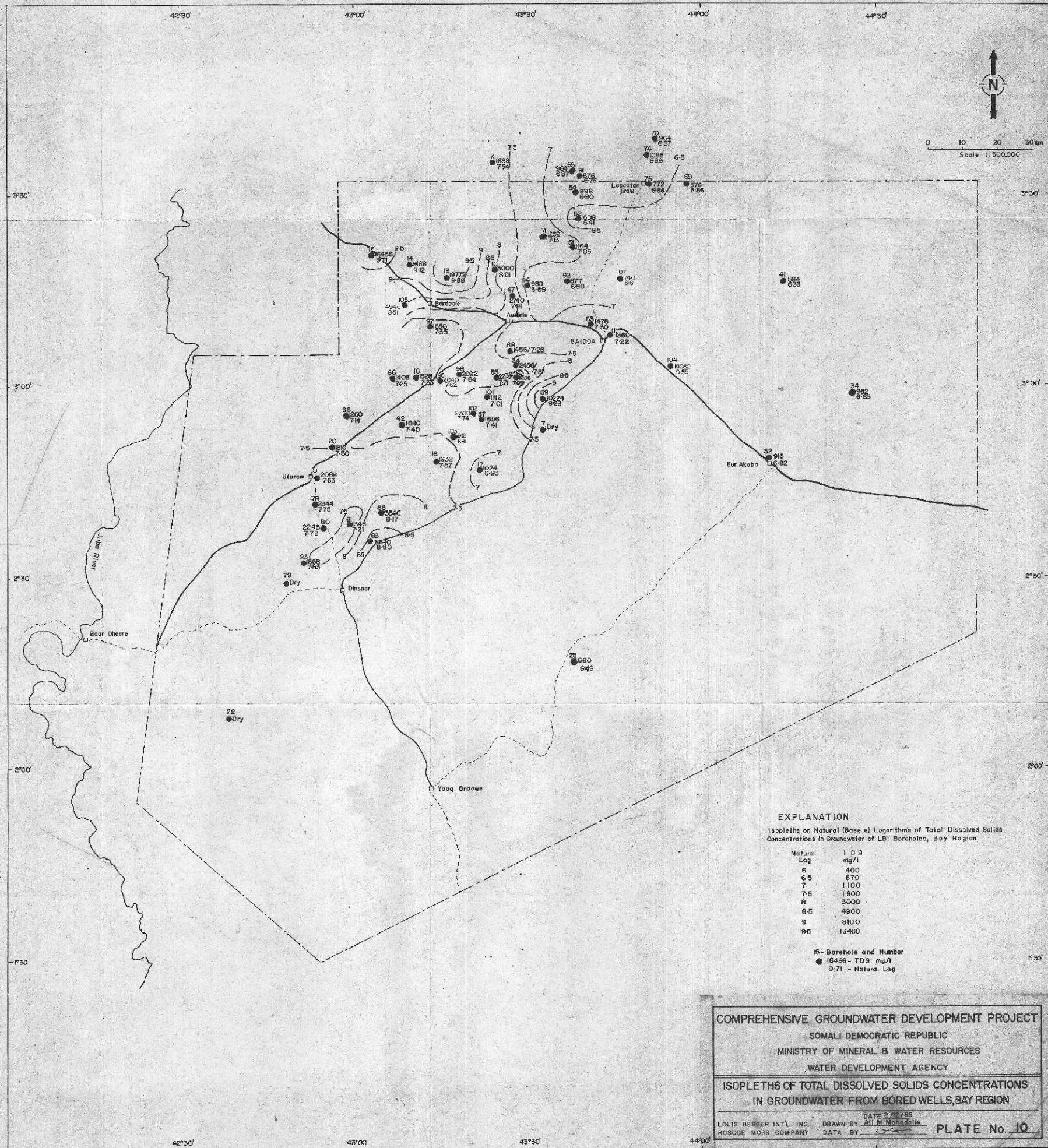
COMPREHENSIVE GROUNDWATER DEVELOPMENT PROJECT	
SOMALI DEMOCRATIC REPUBLIC	
MINISTRY OF MINERAL & WATER RESOURCES	
WATER DEVELOPMENT AGENCY	
DIAGRAMMATIC CROSS-SECTIONS THROUGH SELECTED BOREHOLES, BAY REGION	
LOUIS BERGER INT'L. INC. ROSCOE MOSS COMPANY	DRAWN BY A.M. Nohordane DATA BY _____
DATE 16/11/85	
PLATE NO. 5	

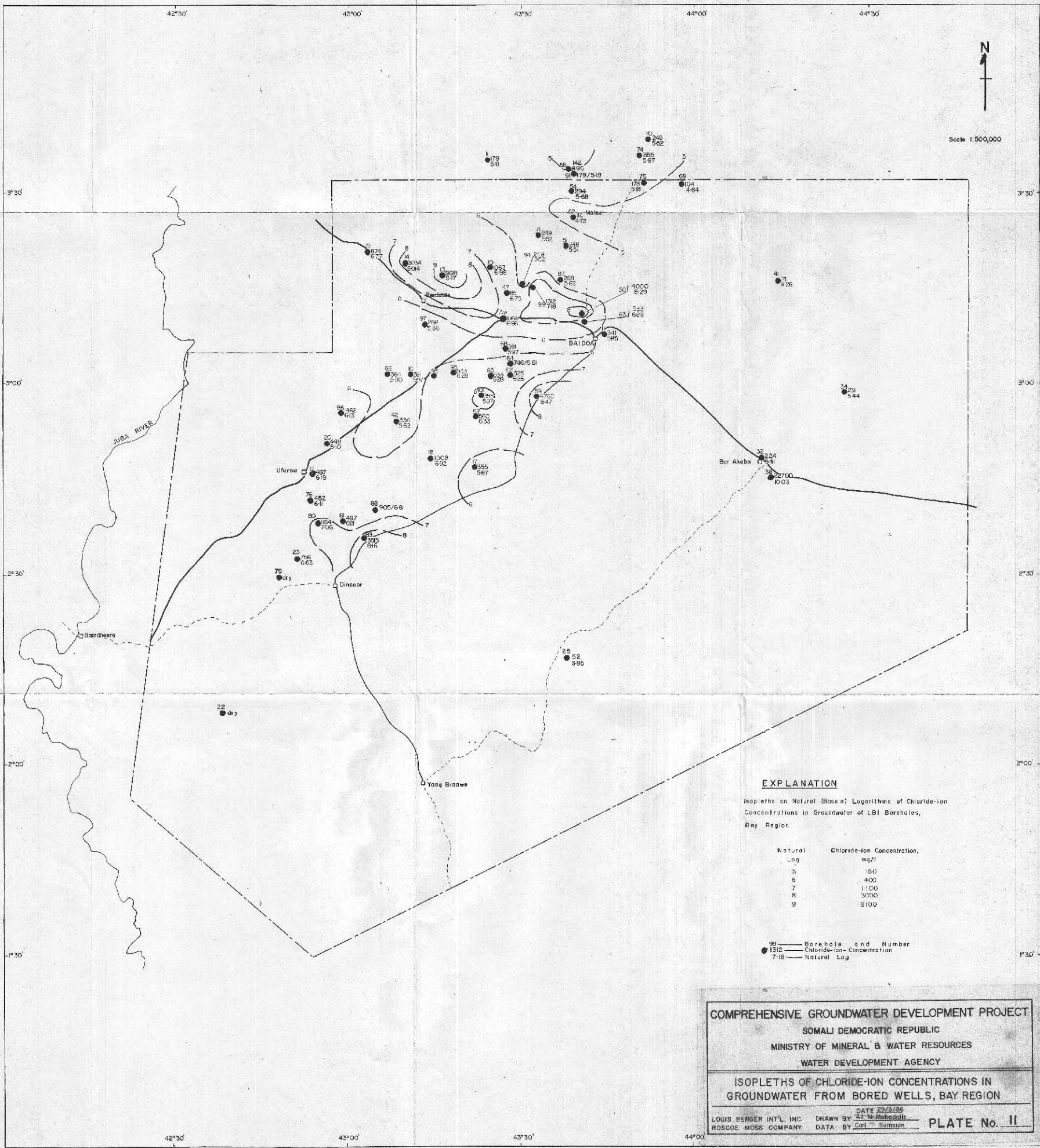


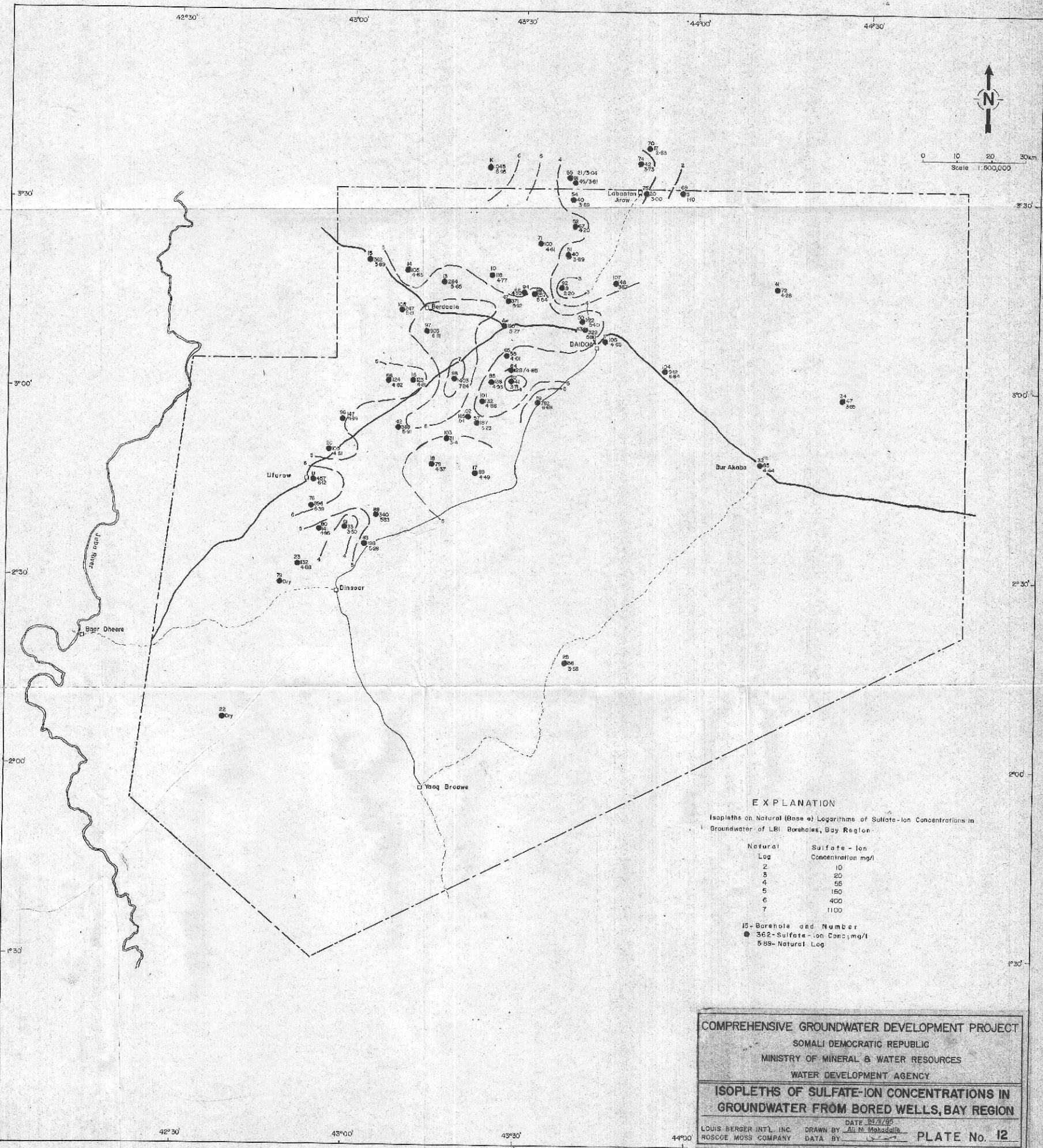












42°30'

43°00'

43°30'

44°00'

44°30'



0 10 20 30 km
Scale 1:500,000

-3°30'

3°30'

-3°00'

3°00'

-2°30'

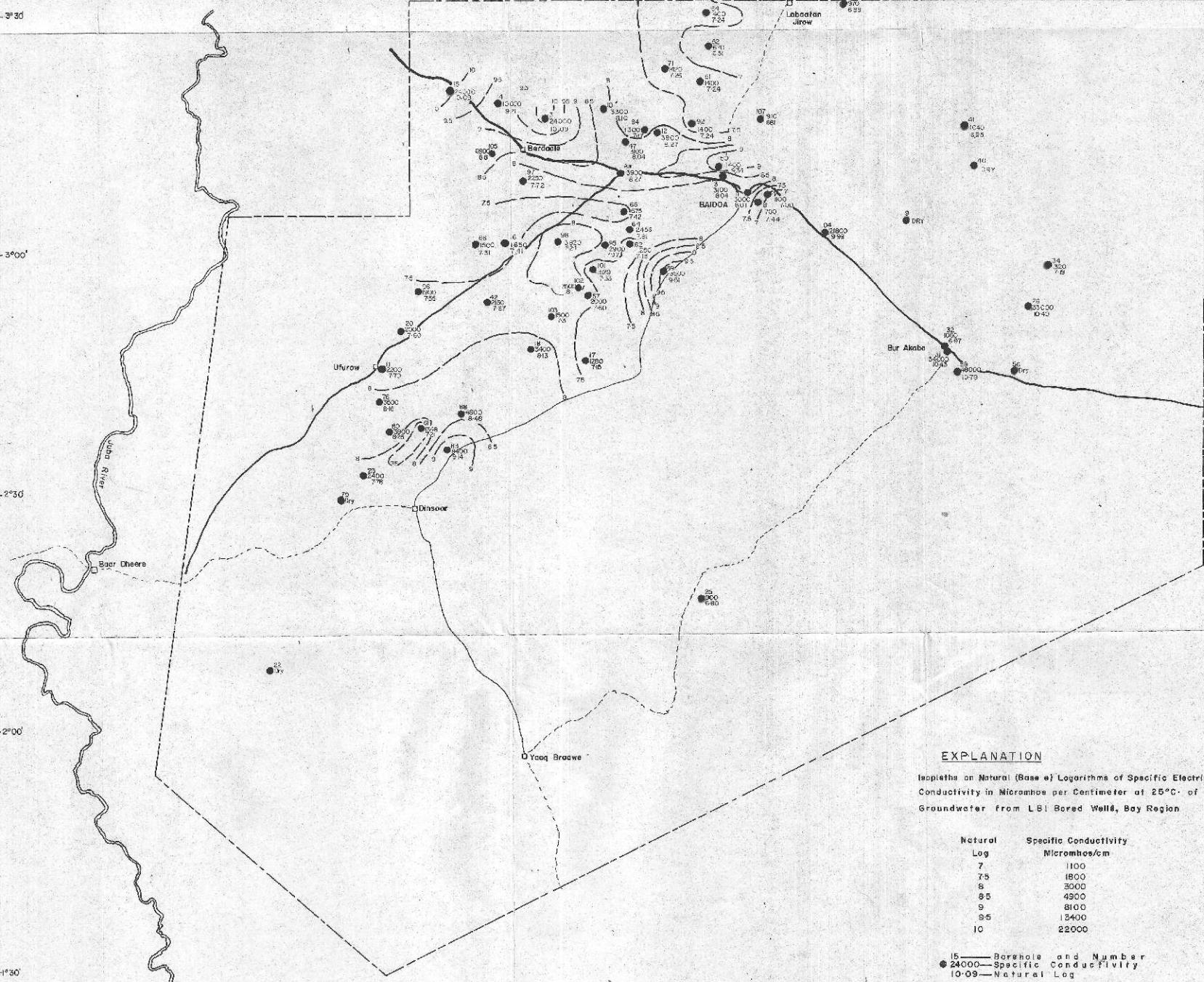
2°30'

-2°00'

2°00'

-1°30'

1°30'



COMPREHENSIVE GROUNDWATER DEVELOPMENT PROJECT
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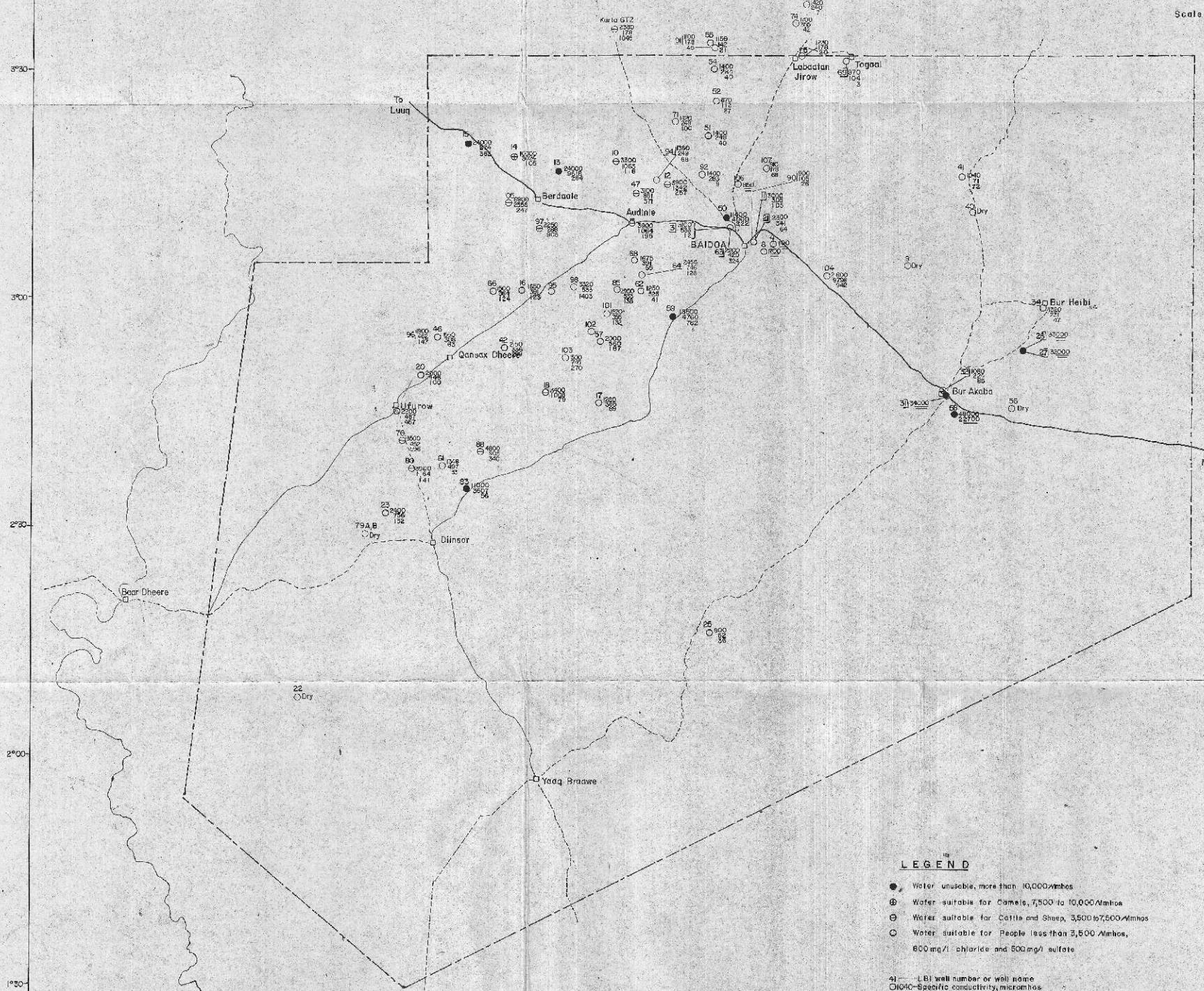
ISOPLETHS OF SPECIFIC CONDUCTIVITY OF GROUNDWATER FROM BORED WELLS, BAY REGION

LOUIS BERGER INT'L. INC. DRAWN BY Ali M. Mohamud
ROScoe MOSS COMPANY DATA BY DATE 20/11/85

PLATE No. 13

42°00' 42°30' 43°00' 43°30' 44°00' 44°30' 45°00'

Scale 1:500,000



COMPREHENSIVE GROUNDWATER DEVELOPMENT PROJECT

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MINISTRY OF MINERAL & WATER RESOURCES

WATER DEVELOPMENT AGENCY

QUALITY OF WATER FOR USE, LBI BORED WELLS,
BAY REGION

LOUIS BERGER INT'L INC. DATE _____
ROScoe MOSS COMPANY DRAWN BY A.M. MAHADALLE
DATA BY _____

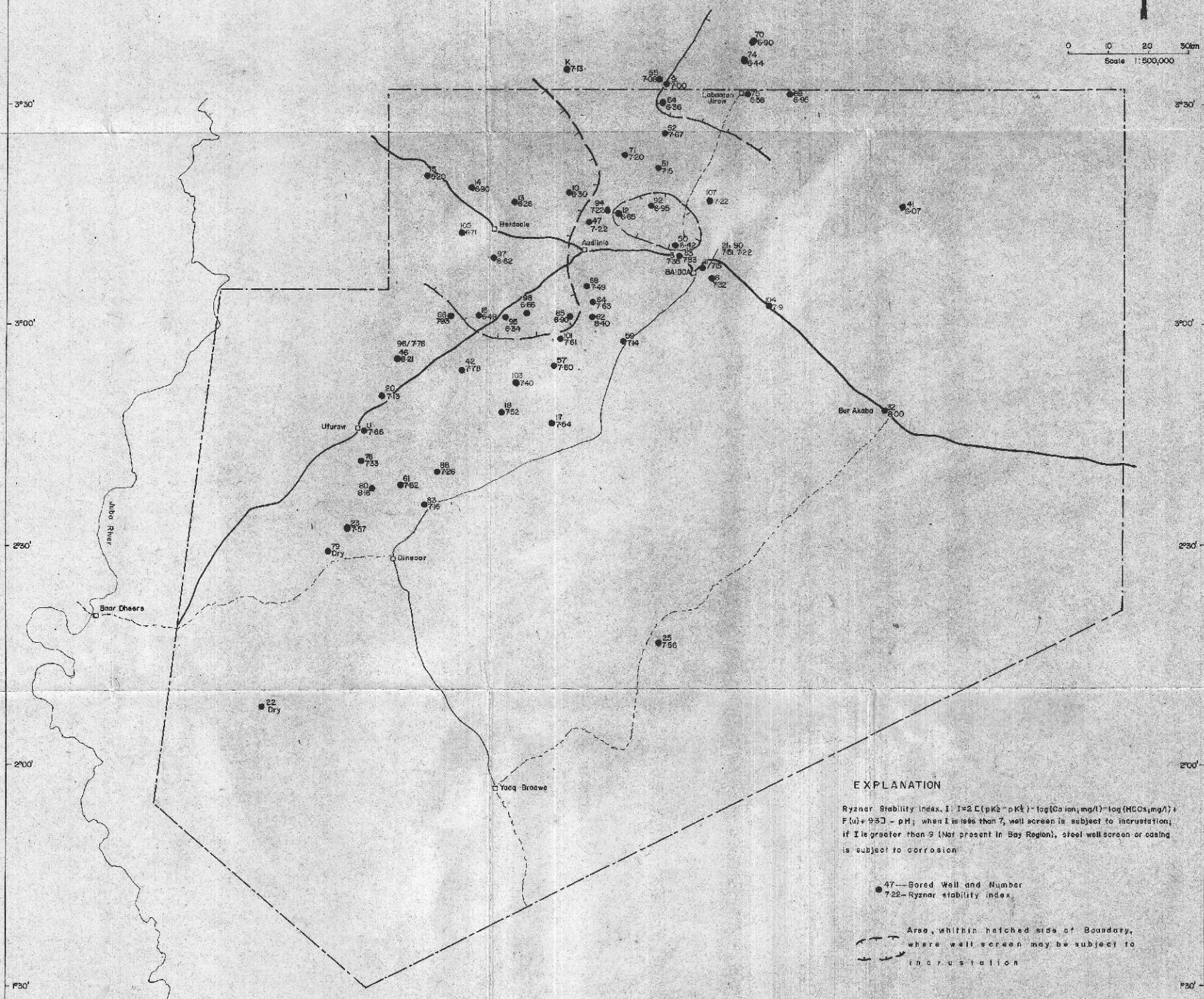
AWN BY A.M MAHADALLE

PLATE N° 14

42°30' 43°00' 43°30' 44°00' 44°30'



0 10 20 30km
Scale 1:500,000



COMPREHENSIVE GROUNDWATER DEVELOPMENT PROJECT

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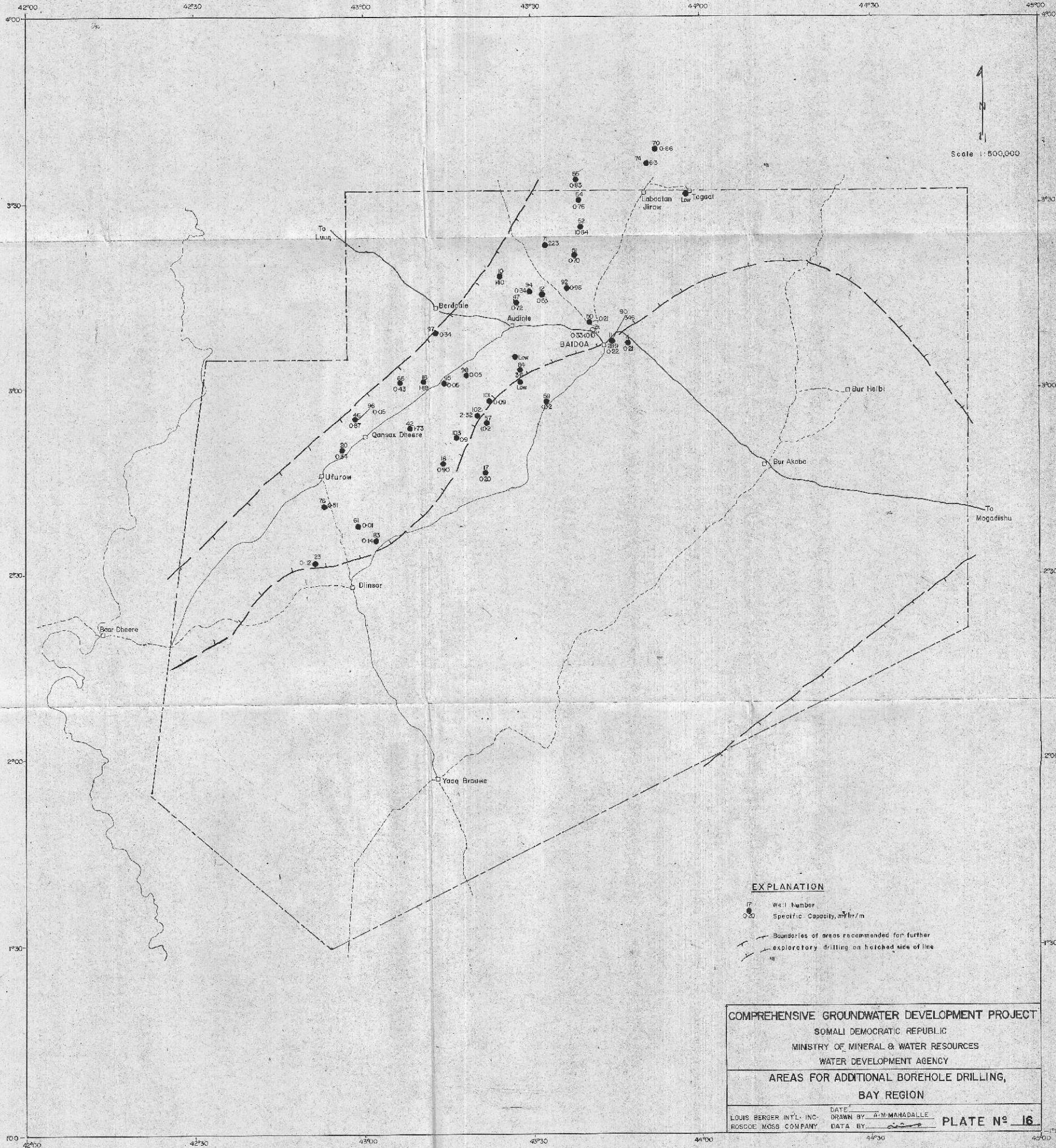
WATER DEVELOPMENT AGENCY

WELL SCREEN INCRUSTATION POTENTIALS FROM
RYZNAR STABILITY INDICES, BORED WELLS, BAY REGION

LOUIS BERGER INT'L, INC. DRAWN BY
ROScoe MOSS COMPANY DATA BY

DATE 10/12/85

PLATE No. 15



EXPLANATION

17 Well Number
20 Specific Capacity, m³/hr/m

Boundary of areas recommended for further exploratory drilling on hatched side of line

COMPREHENSIVE GROUNDWATER DEVELOPMENT PROJECT

SOMALI DEMOCRATIC REPUBLIC

**MINISTRY OF MINERAL & WATER RESOU
RE DEVELOPMENT AGENCY**

WATER DEVELOPMENT AGENCY
AREAS FOR ADDITIONAL BOREHOLE DRILLING

LOUIS BERGER INT'L. INC.
ROSCOE MOSS COMPANY

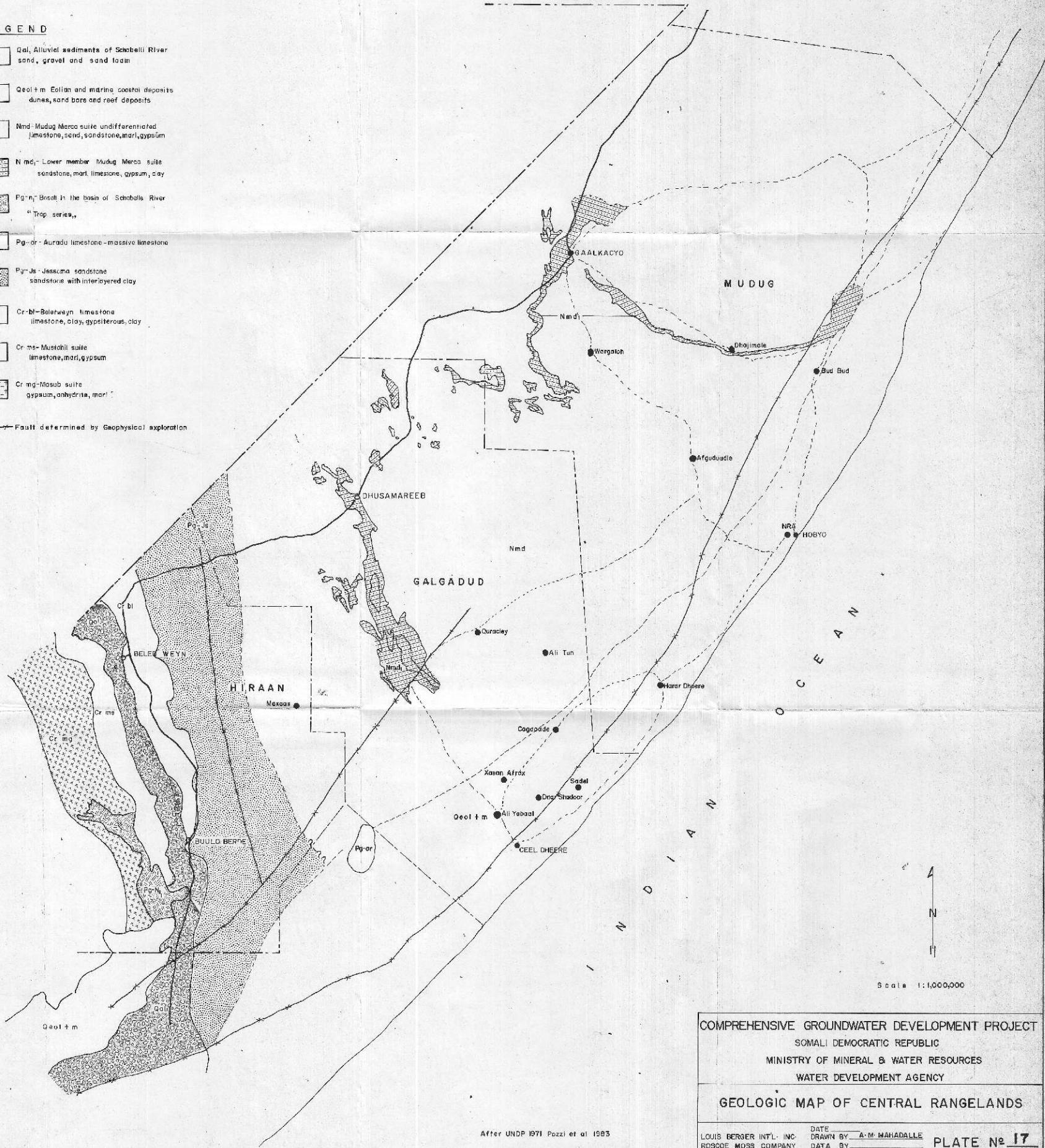
DATE
DRAWN BY A.M.MAHADALLE
DATA BY

PLATE N° 16

LEGEND

Quaternary (undifferentiated)	Qal. Alluvial sediments of Shabelle River sand, gravel and sand loam
Pliocene- Quaternary	Qeol + m. Eolian and marine coastal deposits dunes, sand bars and reef deposits
Miocene	Nmd - Mudug Merca suite undifferentiated limestone, sand, sandstone, marl, gypsum
	N md - Lower member Mudug Merca suite sandstone, marl, limestone, gypsum, clay
Paleogene- Early Neogene	Pg-n - Basalt in the basin of Shabelle River "Trop series"
	Pg-or - Auradu limestone - massive limestone
Paleocene	Pg-Js - Jessoma sandstone sandstone with interlayered clay
Late Cretaceous	Cr-bl - Belalweyn limestone limestone, clay, gypsumiferous, clay
Early-Cretaceous	Cr-ms - Mustahil suite limestone, marl, gypsum
	Cr-md - Masub suite gypsum, anhydrite, marl

X - Fault determined by Geophysical exploration



Scale 1:1,000,000

COMPREHENSIVE GROUNDWATER DEVELOPMENT PROJECT
SOMALI DEMOCRATIC REPUBLIC
MINISTRY OF MINERAL & WATER RESOURCES
WATER DEVELOPMENT AGENCY

GEOLOGIC MAP OF CENTRAL RANGELANDS

After UNDP 1971 Pozzi et al 1983

DATE DRAWN BY A.M. MAHADALLE
LOUIS BERGER INT'L. INC. ROSCOE MOSS COMPANY DATA BY PLATE NO. 17

